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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Pat Reich	Examiner:	Torres, Alicia M.
Serial No.:	10/821,026	Group Art Unit:	3671
Filed:	April 8, 2004	Docket No.:	A480.101.101
Title:	RIDING MOWER WITH DECK HEIGHT ADJUSTMENT		

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Mail Stop Appeal Brief - Patents
Commissioner for Patents
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Alexandria, VA 22313-1450

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1. Transmittal Sheet (in duplicate) (2 pg.);
2. Third Amended Appeal Brief Under 37 C.F.R. § 41.37 (18 pages); and
3. A copy of the Federal Court decision rendered in Innova/Pure Water, Inc. as listed in the Evidence Appendix (11 pgs.).

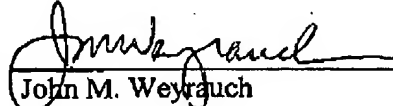
Respectfully submitted,

Pat Reich et al.,

By their attorneys,

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Date: November 2, 2006
JMW:imv

By: 
John M. Weyrauch
Reg. No. 37,258

32 PAGES - INCLUDING COVER PAGE

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Pat Reich

Examiner: Torres, Alicia M.

Serial No.: 10/821,026

Group Art Unit: 3671

Filed: April 8, 2004

Docket No.: A480.101.101

Title: RIDING MOWER WITH DECK HEIGHT ADJUSTMENT

Mail Stop Appeal Brief - Patents

The Honorable Commissioner of Patents and Trademarks

P.O. Box 1450

Alexandria, VA 22313-1450

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- ☒ Third Amended Appeal Brief Under 37 C.F.R. § 41.37 (18 pgs.).
- ☒ A copy of the Federal Court decision rendered in Innova/Pure Water, Inc. as listed in the Evidence Appendix (11 pgs.)

If an additional fee is required due to changes to the claims, the fee has been calculated as follows:

CLAIMS AS AMENDED						
	(1) Claims Remaining After Amendment		(2) Highest Number Previously Paid For	(3) Present Extra	Rate	Fee
TOTAL CLAIMS		-			x =	\$
INDEPENDENT CLAIMS		-			x =	\$
[] MULTIPLE DEPENDENT CLAIMS PRESENTED						\$
TOTAL						\$

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By: 

Name: John M. Weyrauch

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Pat Reich

Examiner: Torres, Alicia M.

Serial No.: 10/821,026

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TOTAL CLAIMS		-			x =	\$
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[] MULTIPLE DEPENDENT CLAIMS PRESENTED						\$
TOTAL						\$

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By:

Name: John M. Weyrauch

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicant:	Pat Reich	Examiner:	Torres, Alicia M.
Serial No.:	10/821.026	Group Art Unit:	3671
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THIRD AMENDED APPEAL BRIEF UNDER 37 C.F.R. § 41.37

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Alexandria, VA 22313-1450

Dear Sir/Madam:

This submission is in response to a third Notification of Non-Compliant Appeal Brief, dated October 5, 2006. This is an appeal from an Office Action dated January 4, 2006 in which claims 1-4, 9, 14 and 17 were finally rejected and claims 5-8 and 10-13 were objected to.

Oral Hearing

Applicant does not request an Oral Hearing of the Appeal in this application.

Real Party in Interest

The real party in interest is Auburn Consolidated Industries, Inc., who is the owner of the entire right, title and interest in the application.

Related Appeals and Interferences

There are no known related appeals or interferences which will directly affect or directly be affected by or have a bearing on the Board's decision in this appeal.

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Third Amended Appeal Brief to the Board of Patent Appeals and Interferences

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Title: RIDING MOWER WITH DECK HEIGHT ADJUSTMENT

Status of the Claims**I. Total number of claims in the application.**

Claims in the application are: 1-17

II. Status of all the claims.

- A. Claims canceled: 15-16
- B. Claims withdrawn but not canceled: none
- C. Claims pending: 1-14 and 17
- D. Claims allowed: none
- E. Claims rejected: 1-4, 9, 14 and 17
- F. Claims objected to: 5-8 and 10-13

III. Claims on appeal.

- A. The claims on appeal are: 1-4, 9, 14 and 17.

Status of Amendments

No Amendment was filed in response to the final office action dated January 4, 2006.

Summary of Claimed Subject Matter

The present invention relates to an apparatus (independent claim 1), a method (independent claim 9), and a system (independent claim 14) for adjusting the height of a mowing deck 30 of a riding mower 20.

With reference to independent claim 1, one aspect of the present invention provides an apparatus for adjusting the height of the mowing deck 30 of the riding mower 20 relative to a ground surface, the riding mower 20 having a frame 22 supporting an operator seating area 26 and a deck lift system 50, where the mowing deck 30 is supported by the deck lift system 50. The apparatus includes a lever 46 pivotally connected to the frame 22 of the mower 20 proximate the operator seating area 26, a moveable arm 52 having a first end 72 pivotally connected to the lever 46, and a cam wheel 190 rotationally connected to the frame 22 of the mower 20 proximate a shoulder

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Title: RIDING MOWER WITH DECK HEIGHT ADJUSTMENT

179 of the arm 52. The movable arm 52 includes a second end 74 opposite the first end 72, the second end 74 operably connected to the deck lift system 50. The general operation of deck lift assembly 50 is depicted in Fig. 6 and is described in the specification on page 11, lines 12-28 through page 12, lines 1-7. The shoulder 179 is generally adjacent the operator seating area 26. The shoulder 179 connects to and extends generally normal to the arm 52. The cam wheel 190 has an axis of rotation and an outer edge 214 of varying radius r relative to the axis of rotation. The shoulder 179 contacts a portion of the outer edge 214 when the lever 46 is in a first position, and the shoulder 179 is spaced from the outer edge 214 when the lever 46 is in a second position. In this regard, the mowing deck 30 height above the ground surface is a function of the radius r of the cam 190 outer edge 214 in contact with the shoulder 179. (See, e.g., Figs. 9 and 10, page 14, lines 11-16).

With reference to independent claim 9, another aspect of the present invention provides a method of adjusting the deck height on a riding mower 20 from a first deck height to a second deck height, the riding mower 20 having a frame 22, a deck lift mechanism 50 connected to the frame 22, a mowing deck 30 connected to and supported by the deck lift mechanism 50, and an operator seating area 26. Reference is made to Fig. 6 and the specification at page 11, lines 12-28 through page 12, lines 1-7 regarding the following description. The method includes providing a lever 46 pivotally connected to the frame 22 proximate to the operator seating area 26, and providing a displaceable arm 52 operably connected between the lever 46 and the deck lift system 50, where the displaceable arm 52 includes a shoulder 179 on the arm 72 between the lever 46 and the deck lift system 50. The method additionally includes providing a cam wheel 190 rotationally connected to the frame 22 near the shoulder 179 of the displaceable arm 52, the cam wheel 190 having an axis of rotation, an outer edge 214, and a varying radius r relative to the axis of rotation, where a portion of the outer edge 214 contacts the shoulder 179 when the lever 46 is in a first position. The method further includes moving the lever 46 from the first position to a second position, and displacing the

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Title: RIDING MOWER WITH DECK HEIGHT ADJUSTMENT

arm 52 and locating the shoulder 179 away from the outer edge 214 of the cam 190, thereby lifting the mowing deck 30 to a raised position. The method still further includes rotating the cam wheel 190 to a position representative of a desired deck height, and moving the lever 46 from the second position to the first position, thereby displacing the arm 52 and locating the shoulder 179 in contact with the cam outer edge 214 to lower the mowing deck to the desired height.

With reference to independent claim 14, another aspect of the present invention provides a deck lift system 50 for adjusting the height of a mowing deck 30 of a riding mower 20 relative to a ground surface, the mower 20 having an operator seating area 26 and a frame 22, as described in the specification on page 11, lines 12-28 through page 12, lines 1-7 and shown in Fig. 6. The deck lift system 50 (See FIG. 6, and the specification beginning at page 9, line 16) includes a rear rotating assembly 54 rotatably connected to the frame 22 and connected to a rear portion of the mowing deck 30, a front rotating assembly 56 rotatably mounted to the frame 22 and connected to a front portion of the mowing deck 30, and linking members 58 connecting the front 56 and rear 54 rotating assemblies. The deck lift system 50 additionally includes means for operating the deck lift system 50 to raise and lower the mowing deck 30 (See FIG. 8, and the specification beginning at page 10, line 14). The means for operating includes a lever 46 pivotally connected to the frame 22 proximate to the operator seating area 26, and a displaceable arm 52 having a first end 72 pivotally connected to the lever 46 and a second end 74 connected to the rear rotating assembly 54 of the deck lift system 50. The deck lift system 50 further includes means operable within the operating means for adjusting the height of the mowing deck 30. The means for adjusting the deck height includes a shoulder 179 connected to the arm 52 between the first end 72 and the second end 74, the shoulder 179 extending normal to a direction of displacement of the displaceable arm 52, and a cam wheel 190 rotationally connected to the frame 22 of the mower 20 proximate the shoulder 179 of the arm 52 (See FIGS. 9-10, and the specification between pages 9-14). In this regard, the cam wheel 190 has an axis of rotation, an outer edge 214, and a varying radius r relative to the axis of rotation,

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where a portion of the cam outer edge 214 contacts the shoulder 179 when the mowing deck 30 is in the deck down position, and where the height of the mowing deck 30 above the ground surface in the deck down position is a function of the radius of the cam outer edge 214 in contact with the shoulder 179 (See FIG. 9).

Grounds of Rejections to be Reviewed on Appeal

Whether claims 1, 9 and 14 are unpatentable under 35 U.S.C. § 102(e) as being anticipated by Swartzendruber et al. 6,837,032.

The following groupings of claims are made solely in the interest of consolidating issues and expediting this Appeal. No grouping of claims is intended to be nor should be interpreted as being any form of admission or a statement as to the scope or obviousness of any limitations.

Group I: Claims 1 and 14

Group II: Claim 9.

Argument**I. Independent Claims 1, 9, and 14 are Patentably Distinct over Swartzendruber et al., U.S. Pat. No. 6,837,032.**

The Examiner rejected claims 1-4, 9, 14 and 17 under 35 U.S.C. 102(e) as being anticipated by Swartzendruber et al. 6,837,032. Because Swartzendruber et al. does not disclose a deck height adjustment mechanism having a moveable arm and shoulder as defined in claims 1, 9 and 14, the final rejection cannot be sustained.

In stating the final rejection, the Examiner asserted that a plate 90 of Swartzendruber et al. satisfies the moveable arm and shoulder requirement of the rejected claims. However, item 90 is not pivotally connected to the lever and is not a moveable arm as defined in the claims. Rather, the deck height adjustment mechanism of Swartzendruber et al. employs a lever 62 that is pivotally formed as part of plate 44 via a shaft 64. (Swartzendruber et al. Col. 3, lines 43-45). A rod 69 has one end connected to the lever 62 and the opposite end connected to a

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plate 72. (Col. 3, lines 47-49). Plate 72 in turn is connected to one end of a rockshaft 70. (Fig. 8). The opposite end of rockshaft 70 connects to a plate 74. (Fig. 8). Plates 72 and 74 are connected by lift links 76 to arms 42 which connect to brackets 40 on the mowing deck 18. Rotation of lever 62 causes a rotation of plate 72 (due to the connection of rod 69 between lever 62 and plate 72) and plate 74 (via the connection of rockshaft 70 between plates 72 and 74). Deck 18 is raised by depressing pedal 28 attached to an end 60 of lever 62 and is lowered by reversing direction of lever 62. To maintain the deck height, Swartzendruber et al. disclose a plate 90 that is mounted on rockshaft 70 between plates 72 and 74. (Fig. 8, Col 3, lines 58-59). Plate 90 is caused to rotate in conjunction with the rotation of rockshaft 70. In the deck down position, an edge of plate 90 rests against a height of cut adjuster 118. (Fig. 6, Col. 4, lines 35-38).

A. Claims 1 and 14 distinguish over Swartzendruber et al.

Claims 1 and 14 distinguish over Swartzendruber et al. Claim 1 defines a deck height adjustment apparatus that comprises a lever that is pivotally connected to the frame of the mower. The lever is connected to a first end of a moveable arm. A second end of the moveable arm is operably connected to a deck lift system. The moveable arm is also provided with a shoulder that is positioned between the first and second ends of the moveable arm. The shoulder is connected to and extends normal to the arm. A cam wheel is rotationally connected to the frame of the mower proximate to the shoulder of the arm. The shoulder engages a portion of the outer edge of the cam wheel when the lever is in a first position. A movement of the lever to a second position results in the shoulder becoming spaced from the outer edge of the cam wheel. The mowing deck height above the ground surface is a function of the radius of the cam outer edge in contact with the shoulder when the lever is in the first position. Claim 14 is similar to claim 1 except the deck lift system is defined as comprising a front and a rear rotating assembly connected to the mowing deck and the second end of the arm is connected to the rear rotating

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assembly of the deck lift system.

Plate 90 of Swartzendruber et al. cannot properly be considered an arm as defined in claims 1 and 14. The arm of claims 1 and 14 require that a first end of the arm be connected to the lever. Plate 90 does not have a first end connected to lever 62. Plate 90 cooperates with lever 62 only through a series of connections, i.e., rockshaft 70, plate 74 and rod 69. The only component of Swartzendruber et al. that is connected at one end to lever 62 is rod 69. The second end of rod 69 is connected to the lift mechanism 34, i.e., at plate 74. The Examiner's characterization that a direct connection of the arm to the lever is irrelevant does not accord with the express connection of one end of the arm to the lever defined in claims 1 and 14.

Plate 90 further lacks a shoulder as defined in claims 1 and 14. It is the shoulder of applicant's claimed invention that engages the cam wheel to maintain a selected height of the mowing deck. The shoulder is connected to the arm, but extends normal to the arm. The edge of the arm therefore cannot qualify as a shoulder as defined in claims 1 and 14. The arm itself does not contact the cam wheel, rather it is a shoulder that extends from the arm that engages the cam wheel. Swartzendruber et al. disclose that an edge of a planar plate 90 engages the height of cut adjuster 118. The edge of a planar plate cannot properly constitute a structure that extends normal to the plate, i.e., a shoulder. Accordingly, Swartzendruber et al. does not disclose an arm having a first end connected to the lever with a shoulder on the arm that extends normal to the arm for contacting a cam wheel. As such, the rejection of claims 1 and 14 under 35 U.S.C. 102(e) should not be sustained.

B. Claim 9 distinguishes over Swartzendruber et al.

Claim 9 is a method for adjusting the deck height on a riding mower which is an analog to claims 1 and 14 in that it comprises the step of providing a displaceable arm operably connected between a lever that is pivotally connected to the mower frame and a lift system for the mowing deck. Like the arm of claims 1 and 14, the arm of claim 9 includes a shoulder on the

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arm that is located between the lever and the deck lift system. According to the method of claim 9, when the lever is in a first position, the shoulder of the arm contacts the outer edge of a cam wheel that is rotationally connected to the frame, which thereby sets the desired deck height. According to the claimed method, the deck height may be changed by moving the lever from the first position to a second position thereby causing a displacement of the arm and a location of the shoulder away from the cam outer edge. This results in a raising of the mowing deck. The cam wheel is then rotated to select a desired deck height. The lever is then moved back to the first position, thereby displacing the arm and locating the shoulder in contact with the cam outer edge so as to lower the mowing deck to the selected height.

As disclosed in Applicant's specification, the arm provided to perform the claimed method is an elongate metal member that includes a first end and a second end. (Specification Page 8, lines 1-2). The first end of the arm is connected to the lever, and the second end of the arm is connected to part of the deck lift system, e.g., the rear shaft assembly 54. (Specification page 11, lines 14-19). The arm passes between the cam wheel 190 and the selector wheel 194. (See specification page 13, lines 9-10). The arm itself does not contact the cam wheel. As disclosed in the specification, a pivotal movement of the lever causes a linear movement of the arm (i.e., the displacement of the arm) and a rotational movement of the deck lift system. (Specification page 11, lines 14-19). A shoulder is provided on the arm between the two ends of the arm (i.e., between the lever and the deck lift system). (Specification page 12, lines 13-16). The shoulder is located to contact the cam wheel mounted on the frame of the mower. (Specification page 13, lines 11-13).

The method of claim 9 is not disclosed in Swartzendruber et al. Arguments presented relative to claims 1 and 14 have general application to the rejection of claim 9 as well. Furthermore, Swartzendruber et al. do not disclose an arm that is operably connected between the lever and the deck lift system as defined in the method of claim 9. Properly interpreted, the term

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“operably connected” must be defined in a manner that reflects the intended purpose of the claimed invention. *See, e.g., Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc.*, 381 F.3d 1111, 1118 (Fed. Cir. 2004) (“[The term ‘operatively connected’] is a general descriptive term frequently used in patent drafting to reflect a functional relationship between claimed components.”). A copy of *Innova/Pure Water, Inc.* is included with this Brief for consideration by the Board. The operable connection of the arm to the lever and the deck lift system defined in claim 9 associates the arm with the lifting and lowering movement of the mowing deck. According to claim 9, the mowing deck is lifted when the lever is moved from the first position to the second position and the arm is displaced to locate the shoulder away from the outer edge of the cam. The arm is thus not a passive component of the lifting operation. This intended purpose of the claimed operable connection between the lever, arm and deck lift system accords with Applicant’s specification discussed *infra* at page 3.

In *Swartzendruber et al.*, however, plate 90, which the Examiner has erroneously interpreted to satisfy the arm requirement of claim 9, plays no role in the lifting operation of the deck. Rather, *Swartzendruber et al.* disclose that the deck lifting process is the result of a rotation of lever 62, which causes a rotation of plate 72 (due to the connection of rod 69 between lever 62 and plate 72) and plate 74 (via the connection of rockshaft 70 between plates 72 and 74). Plates 72 and 74 are connected by lift links 76 to arms 42 which connect to brackets 40 on the mowing deck 18. Plate 90 merely rotates with rockshaft 70 away from and toward the height of cut adjuster 118. Plate 90 serves no purpose in lifting the mowing deck and cannot properly be considered to be operably connected between a lever and a deck lift system.

In addition, *Swartzendruber et al.* does not disclose a shoulder that is located on the arm so as to be between the lever and the deck lift system. The Examiner has erroneously interpreted the edge of plate 90 to satisfy the shoulder requirement of claim 9. A shoulder as defined in Applicant’s specification is a structure that is secured to and extends laterally of an

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intermediate portion 76 of arm 52. (Fig. 6, page 12, lines 13-16). The edge of planar plate 90 is not such a structure. Further, in that plate 90 does not extend between the lever and the deck lift system, it is erroneous to interpret the edge of plate 90 as a disclosure of a shoulder on an arm between the lever and the deck lift system, as required by claim 9. For all of the aforementioned reasons, Applicant respectfully submits that the rejection of claim 9 under 35 U.S.C. 102(e) as anticipated by Swartzendruber et al. should be overturned.

Conclusion

Swartzendruber et al. does not disclose a deck height adjustment mechanism having a moveable arm and shoulder as defined in claims 1, 9 and 14. Accordingly, it is respectfully requested that the Board reverse the final rejection of claims 1-4, 9, 14 and 17 and direct that the instant application proceed to allowance.

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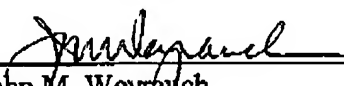
Any inquiry regarding this Appeal Brief should be directed to John M. Weyrauch at Telephone No. (612) 767-2511, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

Dicke, Billig & Czaja
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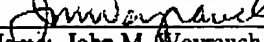
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Date: November 2, 2006

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By 
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Claims Appendix

[Claims 1-14 and 17 remain pending and are involved in this Appeal]

1. An apparatus for adjusting the height of a mowing deck of a riding mower relative to a ground surface, the riding mower having a frame supporting an operator seating area and a deck lift system, wherein the mowing deck is supported by the deck lift system, the apparatus comprising:
 - a lever pivotally connected to the frame of the mower proximate the operator seating area;
 - a moveable arm having a first end pivotally connected to the lever and a second end, opposite the first end, operably connected to the deck lift system, the arm comprising a shoulder between the first end and the second end generally adjacent the operator seating area, wherein the shoulder connects to and extends generally normal to the arm; and
 - a cam wheel rotationally connected to the frame of the mower proximate the shoulder of the arm, the cam wheel having an axis of rotation and an outer edge of varying radius relative to the axis of rotation, wherein the shoulder contacts a portion of the outer edge when the lever is in a first position, the shoulder is spaced from the outer edge when the lever is in a second position, and wherein the mowing deck height above the ground surface is a function of the radius of the cam outer edge in contact with the shoulder.
2. The apparatus of claim 1 wherein the lever is a foot actuatable lever.
3. The apparatus of claim 1 and further comprising a handle connected to the cam wheel,

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the handle enabling a user to rotate the cam wheel.

4. The apparatus of claim 3 wherein the cam wheel is fixed on a shaft rotatable by the handle, the shaft rotationally connected to the frame of the mower.
5. The apparatus of claim 4 and further comprising a height selector wheel fixed to the rotatable shaft adjacent to the cam wheel, the height selector wheel comprising a plurality of circumferential notches, wherein each notch corresponds to a different radius of the cam wheel.
6. The apparatus of claim 5 and further comprising a latch pivotally connected to the frame of the mower, the latch comprising a finger, the finger of the latch engaging a notch of the height selector wheel when the latch is in a first position, and the finger of the latch disengaging the notch when the latch is in a second position, the cam wheel being rotatable by the handle when the latch is in the second position.
7. The apparatus of claim 6 wherein the height selector wheel comprises a first planar surface oriented towards the operator seating area, the first planar surface having indicia at each notch indicative of a height of the mowing deck relative to the ground surface when the finger of the latch engages the notch.
8. The apparatus of claim 1 and further comprising a transport lock, the transport lock rotatably connected to the frame of the mower proximate the operator seating area, the transport lock having a handle and a finger, the finger engaging the shoulder of the moveable arm when the lever is in the second position and the transport lock is in a first position to secure the mowing deck in a fully raised position, and the finger disengaging the shoulder when the transport lock is in a second

Third Amended Appeal Brief to the Board of Patent Appeals and Interferences

Applicant: Pat Reich

Serial No.: 10/821,026

Filed: April 8, 2004

Docket No.: A480.101.101

Title: RIDING MOWER WITH DECK HEIGHT ADJUSTMENT

position to permit the lever to move to the first position.

9. A method of adjusting the deck height on a riding mower from a first deck height to a second deck height, the riding mower comprising a frame, a deck lift mechanism connected to the frame, a mowing deck connected to and supported by the deck lift mechanism, and an operator seating area, the method comprising:

providing a lever pivotally connected to the frame proximate to the operator seating area;

providing a displaceable arm operably connected between the lever and the deck lift system, the displaceable arm comprising a shoulder on the arm between the lever and the deck lift system; and

providing a cam wheel rotationally connected to the frame near the shoulder of the displaceable arm, the cam wheel having an axis of rotation, an outer edge, and a varying radius relative to the axis of rotation, wherein a portion of the outer edge contacts the shoulder when the lever is in a first position;

moving the lever from the first position to a second position, and displacing the arm and locating the shoulder away from the outer edge of the cam, thereby lifting the mowing deck to a raised position;

rotating the cam wheel to a position representative of a desired deck height; and

moving the lever from the second position to the first position, thereby displacing the arm and locating the shoulder in contact with the cam outer edge to lower the mowing deck to the desired height.

10. The method of claim 9, wherein the step of providing the cam wheel further comprises providing a disk rotationally connected with the cam wheel, the disk and cam wheel

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rotating on a common axis, wherein the disk comprises a plurality of circumferential notches, and positioning a latch in a first circumferential notch.

11. The method of claim 10 wherein disk further comprises indicia at each of the plurality of circumferential notches indicative of a height of the mowing deck relative to the ground surface.

12. The method of claim 10 wherein the step of rotating the cam wheel additionally comprises:

disengaging the latch from the first circumferential notch of the disk;
rotating the cam wheel and the disk; and
engaging the latch into a second circumferential notch in the disk.

13. The method of claim 10 wherein the step of providing the lever comprises providing a foot-actuated lever near the operator seating area.

14. A deck lift system for adjusting the height of a mowing deck of a riding mower relative to a ground surface, the mower having an operator seating area and a frame, the deck lift system comprising:

a rear rotating assembly rotatably connected to the frame and connected to a rear portion of the mowing deck;
a front rotating assembly rotatably mounted to the frame and connected to a front portion of the mowing deck;
linking members connecting the front and rear rotating assemblies;
a means for operating the deck lift system to raise and lower the mowing deck, wherein the means for operating comprises:

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a lever pivotally connected to the frame proximate to the operator seating area; and

a displaceable arm having a first end pivotally connected to the lever and a second end connected to the rear rotating assembly of the deck lift system; and

means operable within the operating means for adjusting the height of the mowing deck, wherein the means for adjusting the deck height comprises:

a shoulder connected to the arm between the first end and the second end, the shoulder extending normal to a direction of displacement of the displaceable arm; and

a cam wheel rotationally connected to the frame of the mower proximate the shoulder of the arm, the cam wheel having an axis of rotation, an outer edge, and a varying radius relative to the axis of rotation, wherein a portion of the cam outer edge contacts the shoulder when the mowing deck is in the deck down position, and wherein the height of the mowing deck above the ground surface in the deck down position is a function of the radius of the cam outer edge in contact with the shoulder.

17. The deck lift system of claim 14 wherein the means for adjusting the deck height at the deck down position additionally comprises means for locking the cam wheel at a position representative of a selected deck height.

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Evidence Appendix

1. *Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc.*, 381 F.3d 1111, 1118 (Fed. Cir. 2004). A copy of the Federal Circuit decision rendered in *Innova/Pure Water, Inc.* and relied upon at page 8 of this Appeal is included for consideration by the Board.

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Related Proceedings Appendix under 37 C.F.R. § 41.37(c)(1)(x)

There are no related proceedings to be considered in this Appeal. Therefore, no such proceedings are identified in this Appendix.

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381 F.3d 1111, *; 2004 U.S. App. LEXIS 16549, **;
72 U.S.P.Q.2D (BNA) 1001

INNOVA/PURE WATER, INC., Plaintiff-Appellant, v. SAFARI WATER FILTRATION SYSTEMS, INC. (doing business as Safari Outdoor Products), Defendant-Appellee.

04-1097

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

381 F.3d 1111; 2004 U.S. App. LEXIS 16549; 72 U.S.P.Q.2D (BNA) 1001

August 11, 2004, Decided

PRIOR HISTORY: [*1] Appealed from: United States District Court for the Middle District of Florida. Judge Steven D. Merryday. Innova/Pure Water, Inc. v. Safari Water Filtration Sys., 289 F. Supp. 2d 1347, 2003 U.S. Dist. LEXIS 19827 (M.D. Fla., 2003)

DISPOSITION: Vacated in part, affirmed in part and remanded. [Briefs and Other Court Documents](#)**CASE SUMMARY**

PROCEDURAL POSTURE: Plaintiff patentee sought review of an order from the United States District Court for the Middle District of Florida, which granted summary judgment of noninfringement in favor of defendant water filtration company in the patentee's infringement action. The patentee also appealed the denial of its motion to amend its complaint to add a later issued patent.

OVERVIEW: The patent, entitled "Bottle Filter Cap," was directed to a water filter assembly and a container incorporating the assembly. The court vacated the district court's summary judgment of noninfringement, finding that the district court erred in its interpretation of "operatively connected," the disputed claim term. The court concluded that the district court's construction improperly imported a tenacious physical engagement limitation into the claim language that did not require a physical engagement that resulted in a unitary structure. The district court also erred in interpreting the designated function to be the operation of creating a filter assembly with a unitary structure. The court found that the proper designated function was filtering. The court disagreed with the district court's conclusion that plaintiff, in the course of prosecution, surrendered the method of using a range to position the filter element, which was employed in defendant's product. The court held that the district court did not abuse its discretion in denying plaintiff's motion to amend, which was filed 10 months after discovery closed and nine months after summary judgment.

motions were filed.

OUTCOME: The court vacated the district court's summary judgment of noninfringement and remanded for further proceedings. The court affirmed the denial of plaintiff's motion to amend.

CORE TERMS: tube, cap, filter, connectec, operatively, filtering, bottle, written description, patentee, engagement, tenacious, embodiment, patent, invention, examiner, liquid, assembly, flange, summary judgment, infringement, water, unitary, affixed, specification, valve, surface, motion to amend, mechanical, welding, mouth

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Civil Procedure > Summary Judgment > Appellate Review > Standards of Review

Civil Procedure > Appeals > Standards of Review > De Novo Review

HN1 ↓ The appellate court reviews summary judgment de novo.

Patent Law > Infringement Actions > Claim Interpretation > General Overview

Patent Law > Jurisdiction & Review > Standards of Review > General Overview

HN2 ↓ Determining infringement is a two-step process. First, the meaning and scope of the relevant claims must be ascertained. Second, the properly construed claims must be compared to the accused device. Claim construction, or interpretation, is a question of law. When exercising the power to review claim construction, the appellate court determines the meaning and scope of the relevant claim language and decides whether the district court's determination of the meaning and scope of the relevant claim language is coterminous with that construction. Where it is not, the district court has erred in its construction of the claims.

Civil Procedure > Summary Judgment > Standards > Appropriateness

Civil Procedure > Summary Judgment > Standards > Legal Entitlement

Civil Procedure > Summary Judgment > Standards > Materiality

HN3 ↓ Summary judgment is proper if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law. Fed. R. Civ. P. 56(c). Summary judgment is improper where the evidence is such that a reasonable jury could return a verdict for the non-moving party. Thus, after determining the proper meaning and scope of the relevant claim language, the appellate court decides without deference if the district court was correct in its judgment that no reasonable jury could find, either literally or by application of the doctrine of equivalents, each and every limitation recited in the properly construed claims in the accused device.

Patent Law > Infringement Actions > Claim Interpretation > General Overview

HN4 ↓ The claims of a patent define the invention to which the patentee is entitled the right to exclude. Attending this principle, a claim construction analysis must begin and remain centered on the claim language itself, for that is the language the patentee has chosen to particularly point out and distinctly claim the subject matter which the patentee regards as his invention. 35 U.S.C. § 112, para. 2.

Evidence > Scientific Evidence > General Overview

Patent Law > Claims & Specifications > Enablement Requirement > General Overview

Patent Law > Infringement Actions > Claim Interpretation > General Overview

HN5 ↓ A court construing a patent claim seeks to accord a claim the meaning it would have to a person of ordinary skill in the art at the time of the invention. The inquiry into the meaning that claim terms would have to a person of skill in the art at the time of the invention is an objective one. This being the case, a court looks to those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean. Those sources include the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.

Patent Law > Claims & Specifications > Definiteness > General Overview
 Patent Law > Claims & Specifications > Enablement Requirement > General Overview
 Patent Law > Infringement Actions > Claim Interpretation > General Overview

HN6 The written description provides a context for the claims and is appropriately resorted to for the purpose of better understanding the meaning of a claim and for showing the connection in which a device is used. The claims of a patent may incorporate parts of the written description by reference, thus limiting the patent to the form described. A patent applicant thus has the flexibility to imbue new or old terms with a different meaning than they would otherwise have to a person of ordinary skill in the art. All that is required is that the patent applicant set out the different meaning in the specification in a manner sufficient to give one of ordinary skill in the art notice of the change from ordinary meaning. Because the inquiry into the meaning of claim terms is an objective one, a patentee who notifies the public that claim terms are to be limited beyond their ordinary meaning to one of skill in the art will be bound by that notification, even where it may have been unintended.

Patent Law > Claims & Specifications > Description Requirement > Claim Broadening
 Patent Law > Infringement Actions > Exclusive Rights > General Overview
 Patent Law > U.S. Patent & Trademark Office Proceedings > Reissues > General Overview

HN7 Contrasting axioms state that (a) a claim must be read in view of the specification and (b) a court may not read a limitation into a claim from the specification. There is a "fine line" and "inherent tension" attending the question presented by these axioms. Some persons seem to suppose that a claim in a patent is like a nose of wax which may be turned and twisted in any direction, by merely referring to the specification, so as to make it include something more than, or something different from, what its words express. The context may, undoubtedly, be resorted to, and often is resorted to, for the purpose of better understanding the meaning of the claim; but not for the purpose of changing it, and making it different from what it is. The claim is a statutory requirement, prescribed for the very purpose of making the patentee define precisely what his invention is; and it is unjust to the public, as well as an evasion of the law, to construe it in a manner different from the plain import of its terms. Accordingly, particular embodiments appearing in the written description will not be used to limit claim language that has broader effect. And, even where a patent describes only a single embodiment, claims will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction.

Patent Law > Infringement Actions > Claim Interpretation > General Overview

HN8 In the absence of modifiers, general descriptive terms are typically construed as having their full meaning.

Patent Law > Claims & Specifications > Claim Language > Preambles
 Patent Law > Infringement Actions > Claim Interpretation > General Overview

HN9 Language in a preamble limits a claim where it breathes life and meaning into the claim, but not where it merely recites a purpose or intended use of the invention.

Patent Law > Infringement Actions > Claim Interpretation > General Overview

HN10 Unless otherwise compelled, when different claims of a patent use the same language, the court gives that language the same effect in each claim.

Patent Law > Infringement Actions > Claim Interpretation > General Overview

Patent Law > Infringement Actions > Claim Interpretation > General Overview

HN11 While not an absolute rule, all claim terms are presumed to have meaning in a claim.

Patent Law > Infringement Actions > Claim Interpretation > General Overview

Patent Law > Infringement Actions > Claim Interpretation > General Overview

HN12 When an applicant uses different terms in a claim it is permissible to infer that he intended his choice of different terms to reflect a differentiation in the meaning of those terms.

Patent Law > Infringement Actions > Claim Interpretation > General Overview

The law does not require the court, where an applicant describes only a single

HN13 embodiment, to construe the claims as limited to that one embodiment. Such a construction is not encouraged or presumed.

Patent Law > Infringement Actions > Claim Interpretation > General Overview

HN14 The doctrine of claim differentiation normally means that limitations stated in dependent claims are not to be read into the independent claim from which they depend. This interpretative tool stems from the common sense notion that different words or phrases used in separate claims are presumed to indicate that the claims have different meanings and scope.

Patent Law > U.S. Patent & Trademark Office Proceedings > Examinations > General Overview

HN15 It is the applicant, not the examiner, who must give up or disclaim subject matter that would otherwise fall within the scope of the claims.

Civil Procedure > Pleading & Practice > Pleadings > Amended Pleadings > General Overview

Civil Procedure > Appeals > Standards of Review > Abuse of Discretion

Patent Law > Jurisdiction & Review > Subject Matter Jurisdiction > Appeals

HN16 On a nonpatent matter, the United States Court of Appeals for the Federal Circuit applies the law of the circuit in which the district court sits. The United States Court of Appeals for the Eleventh Circuit reviews the refusal of leave to amend for abuse of discretion.

Civil Procedure > Pleading & Practice > Pleadings > Amended Pleadings > Leave of Court

Civil Procedure > Appeals > Standards of Review > Abuse of Discretion

HN17 The United States Court of Appeals for the Eleventh Circuit freely grants leave to amend when justice so requires. However, a motion to amend may be denied on numerous grounds, such as undue delay, undue prejudice to the defendants, and futility of the amendment. In addition, it is not an abuse of discretion for a district court to deny a motion for leave to amend following the close of discovery, past the deadline for amendments, and past the deadline for filing dispositive motions.

Briefs and Other Court Documents:

U.S. Circuit Court Brief(s)

COUNSEL: Robert A. Vanderhye, Nixon & Vanderhye P.C., of Arlington, Virginia, argued for plaintiff-appellant.

Catherine E. Stetson, Hogan & Hartson, LLP of Washington, DC, argued for defendant-appellee. On the brief were Raymond A. Kurz and Jelline Jimenez Crowson.

JUDGES: Before CLEVINGER, RADER, and LINN, Circuit Judges.

OPINIONBY: CLEVINGER

OPINION:

*1113] CLEVINGER, Circuit Judge.

Plaintiff-Appellant Innova/Pure Water, Inc. ("Innova") appeals the decision of the United States District Court for the Middle District of Florida granting summary judgment of noninfringement in favor of Defendant-Appellee Safari Water Filtration Systems, Inc. ("Safari") and denying Innova's attempt to amend its complaint to add a later issued patent. Innova/Pure Water, Inc. v. Safari Water Filtration Sys., 289 F. Supp. 2d 347 (M.D. Fla. 2003). Because the district court erred in its interpretation of the term "operatively connected," we vacate the district court's summary judgment of noninfringement and remand for further proceedings. Because the district court did not abuse its discretion in [*2] refusing to allow Innova to amend its complaint to add a later issued patent, we affirm that decision.

Innova sued Safari for infringement of U.S. Patent No. 5,609,759 ("the '759 patent"). The '759 patent, entitled, "Bottle Filter Cap," is directed to a water filter assembly and a container incorporating the assembly. In general terms, the filter assembly described includes a tube of filtering material (alternatively, "filter tube"), a bottle cap, and a valve for dispensing water. In some of the depicted embodiments, the assembly is positioned at the mouth of a container which is a bottle, sealing the bottle and suspending the tube of filtering material in the bottle. More broadly, the filter assembly operates to place the tube of filtering material between the water in the bottle and the valve so that water is filtered

before it exits the bottle. Various embodiments are depicted in Figures 1-12 of the '759 patent.

Safari's accused product is a water bottle with a tube of filtering material, a bottle cap, and a valve. In operation, the tube of filtering material is suspended in the mouth of the bottle by means of an annular flange that rests on the mouth of the bottle. The tube [**3] of filtering material is mechanically sealed in position when the bottle cap is screwed over the mouth of the bottle, thereby contacting the annular flange and fixing the tube of filtering material in position to filter water before it exits the bottle.

At the district court, Innova moved for summary judgment of infringement, asserting literal infringement, or, barring that, infringement under the doctrine of equivalents, of independent claims 1 and 15, and dependent claims 5, 11, and 17-20. Safari moved for summary judgment of noninfringement.

In part, the independent claims at issue in the '759 patent state:

1. A filter assembly for use with a bottle having a circular cross-section neck or open end to simultaneously cap the neck or open end and filter liquid poured [**114] out of the bottle through the neck or open end, comprising:

a tube of filtering material . . . a cap . . . said cap having first and second substantially opposite surfaces . . . a manual valve operatively associated with said cap, in fluid communication with said tube of filtering material and manually movable between a position defining means for allowing liquid flow through said tube and a position defining [**4] means not allowing liquid flow through said tube; and

said tube operatively connected to said cap second surface at said tube second open end . . .

'759 patent, col. 6, ll. 46-64 (emphasis added).

15. A container for dispensing filtered water, comprising:

a plastic bottle . . . a plastic cap . . . said cap having first and second substantially opposite surfaces . . . a . . . tube of or containing filtering material . . . a manual valve operatively associated with said cap, in fluid communication with said tube of filtering material and manually movable between a position defining means for allowing liquid flow through said tube and a position defining means not allowing liquid flow through said tube; and

said tube operatively connected to said cap second surface, and said tube having an outside diameter less than said inside diameter of said neck, and positioned with respect to said cap within said bottle so that said tube axis is substantially transverse to said second surface and so that flow of liquid through said tube is primarily radial with respect to said tube axis during filtering, and through said side wall.

d., col. [**5] 7, l. 55 to col. 8, l. 17 (emphasis added).

The district court construed the claim term "operatively connected" to require that the tube of filtering material be affixed to the cap, i.e., "not merely adjoining or abutting, but affixing the tube to the cap by some tenacious means of physical engagement that results in a unitary structure." Concluding that the annular flange arrangement of Safari's accused product is such that the filter tube is "never affixed to the cap by some tenacious means of physical engagement as required by claims 1 and 15," the district court denied Innova's motion for summary judgment and granted Safari's motion for summary judgment of noninfringement.

On appeal, Innova argues that the district court erred when it interpreted the claims to require that the tube of filtering material be affixed to the cap "by some tenacious means of physical engagement that results in a unitary structure." Innova thus asserts that the district court's conclusions regarding literal infringement and infringement under the doctrine of equivalents cannot stand in light of the proper claim construction and proposes that we reverse, order summary judgment of infringement, and [**6] remand for trial on damages and intentional infringement. Safari insists that the district court properly understood the meaning of "operatively connected" and, particularly in light of the written description and prosecution history, asserts that the claims can only be interpreted as requiring the tenacious physical engagement of the tube of filtering material and the cap. Therefore, argues Safari, the district court did not err in granting summary judgment.

Innova's appeal also challenges the district court's refusal to allow Innova to amend its complaint to add claims of infringement of U.S. Patent 6,165,362 ("the '362 patent"). The '362 patent issued on December 26, 2000, from an application [**115] that claimed priority to the application that issued as the asserted '759 patent. Innova's motion to amend was filed June 13, 2001, approximately six months after

issuance, ten months after the close of discovery (August 1, 2000), and nine months after the filing of summary judgment motions (September 2000). According to the district court, allowing "amendment at [that] stage of the litigation, following Innova's delay, would unduly prejudice Safari." Innova now argues that the district ["7"] court abused its discretion by denying the motion to amend because there was no delay on Innova's part, and no unfair prejudice to Safari would result from allowing the motion.

II

This is an appeal from a final decision of a district court and we have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1). ^{HN1} We review

summary judgment de novo. Conroy v. Reebok Int'l, Ltd., 14 F.3d 1570, 1575 (Fed. Cir. 1994). It is well established that ^{HN2} determining infringement is a two-step process. Markman v. Westview Instruments, Inc., 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc), aff'd, 517 U.S. 370, 134 L. Ed. 2d 577, 116 S. Ct. 1384 (1996). First, the meaning and scope of the relevant claims must be ascertained. *Id.* Second, the properly construed claims must be compared to the accused device. *Id.* Claim construction, or interpretation, is a question of law. Markman v. Westview Instruments, Inc., 517 U.S. 370, 134 L. Ed. 2d 577, 116 S. Ct. 1384 (1996); Cybor Corp. v. Fas Techs., Inc., 138 F.3d 1448, 1454-56 (Fed. Cir. 1998) (en banc). When exercising the power to review claim construction, this court determines ["8"] the meaning and scope of the relevant claim language and decides whether the district court's determination of the meaning and scope of the relevant claim language is coterminous with that construction. Where it is not, the district court has erred in its construction of the claims.

^{HN3} Summary judgment is proper "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." Fed. R. Civ. P. 56(c); see Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 247-48, 91 L. Ed. 2d 202, 106 S. Ct. 2505 (1985). Summary judgment is improper where "the evidence is such that a reasonable jury could return a verdict for the non-moving party." 477 U.S. at 248. Thus, after determining the proper meaning and scope of the relevant claim language, we decide without deference if the district court was correct in its judgment that no reasonable jury could find, either literally or by application of the doctrine of equivalents, each and every limitation recited in the properly ["9"] construed claims in the accused device. Middleton, Inc. v. 3M, 311 F.3d 1384, 1387 (Fed. Cir. 2002); Gart v. Logitech, Inc., 254 F.3d 1334, 1339 (Fed. Cir. 2001); Bai v. L&L Wings, Inc., 160 F.3d 1350, 1353 (Fed. Cir. 1998).

III

It is a bedrock principle of patent law that ^{HN4} the claims of a patent define the invention to which the patentee is entitled the right to exclude. Aro Mfg. Co. v. Convertible Top Replacement Co., 365 U.S. 336, 339, 5 L. Ed. 2d 592, 81 S. Ct. 599, 1961 Dec. Comm'r Pat. 635 (1961) ("The claims made in the patent are the sole measure of the grant."); Altoona Publix Theatres, Inc. v. Am. Tri-Ergon Corp., 294 U.S. 477, 487, 78 L. Ed. 1005, 55 S. Ct. 455, 1935 Dec. Comm'r Pat. 785 (1935) ("Under the statute it is the claims of the patent which define the invention."); Smith v. Snow, 294 U.S. 1, 11, 79 L. Ed. 721, 55 S. Ct. 1116, 279, 1935 Dec. Comm'r Pat. 757 (1935) ("The claims of the patent, not its specifications, measure the invention."); Cont'l Paper Bag Co. v. E. Paper Bag Co., 210 U.S. 405, 419, 52 L. Ed. 1122, 28 S. Ct. 748, 1908 Dec. Comm'r Pat. 594 (1908) ("In making his claim the inventor is at liberty to choose his own form of expression, and while the courts may construe the same in view of the specifications ["10"] and the state of the art, they may not add to or detract from the claim." (citation omitted)); White v. Dunbar, 119 U.S. 47, 52, 30 L. Ed. 303, 7 S. Ct. 72, 1886 Dec. Comm'r Pat. 494 (1886) ("The claim is a statutory requirement, prescribed for the very purpose of making the patentee define precisely what his invention is; and it is unjust to the public . . . to construe it in a manner different from the plain import of its terms."); Merrill v. Yeomans, 94 U.S. 568, 570, 24 L. Ed. 235, 1877 Dec. Comm'r Pat. 279 (1876) ("The statutorily required] distinct and formal claim is, therefore, of primary importance, in the effort to ascertain precisely what it is that is patented to the appellant in this case."); SRI Int'l v. Matsushita Corp. of Am., 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc) ("It is the claims that measure the invention."). Attending this principle, a claim construction analysis must begin and remain centered on the claim language itself, for that is the language the patentee has chosen to "particularly point[] out and distinctly claim[] the subject matter which the patentee regards as his invention." Interactive Gift Express, Inc. v. Compuserve, Inc., 256 F.3d 1323, 1331 (Fed. Cir. 2001) ["11"] (quoting 35 U.S.C. § 112 P 2); see also Johnson Worldwide Assocs., Inc. v. Zebco Corp., 175 F.3d 985, 989-90 (Fed. Cir. 1999).

^{HN5} A court construing a patent claim seeks to accord a claim the meaning it would have to a person of ordinary skill in the art at the time of the invention. See, e.g., SmithKline Beecham Corp. v. Apotex Corp., 365 F.3d 1306, 1313 (Fed. Cir. 2004); Resqnet.com, Inc. v. Lansa, Inc., 346 F.3d 1374, 1378 (Fed. Cir. 2003); Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1342 (Fed. Cir. 2001); Johnson Worldwide, 175 F.3d at 989; Renishaw PLC v. Marposs Societa' Per Azioni, 158 F.3d 1243, 1249 (Fed. Cir. 1998); Carroll Touch, Inc. v. Electro Mech. Sys., Inc., 15 F.3d 1573, 1577 (Fed. Cir. 1993). The inquiry into the meaning that claim terms would have to a person of skill in the art at the time of the invention is an objective one. This being the case, a court looks to those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean. Those sources include ["12"] the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art. See Markman, 52 F.3d at 979-80; accord Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1305-15 (Fed. Cir. 1999); Viltronics Corp. v. Conceptoronic, Inc., 90 F.3d 1576, 1582-83 (Fed. Cir. 1996).

^{HN6} The written description provides a context for the claims, and is appropriately resorted to "for the purpose of better understanding the meaning of a claim," White, 119 U.S. at 51, and for "showing the connection in which a device is used," McCarty v. Lehigh Valley R.R. Co., 160 U.S. 110, 116, 40 L. Ed. 358, 16 S. Ct. 240, 1895 Dec. Comm'r Pat. 721 (1895). The claims of a patent may incorporate parts of the written description by reference, thus "limiting the patent to the form described." Smith, 294 U.S. at 11. A patent applicant thus has the flexibility to imbue new or old terms with a different meaning than they would otherwise have to a person of ordinary skill in the art. See Autogiro Co. of Am. United States, 181 Cl. Cl. 55, 384 F.2d 391, 397 (Cl. Cl. 1117) 1967) ["13"] ("Patent law allows the inventor to be his own

lexicographer."). All that is required is that the patent applicant set out the different meaning in the specification in a manner sufficient to give one of ordinary skill in the art notice of the change from ordinary meaning. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994); *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1387-88 (Fed. Cir. 1992). Because the inquiry into the meaning of claim terms is an objective one, a patentee who notifies the public that claim terms are to be limited beyond their ordinary meaning to one of skill in the art will be bound by that notification, even where it may have been unintended. See, e.g., *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 905-09 (Fed. Cir. 2004); *Scimed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1344 (Fed. Cir. 2001) (stating, in the written description, "[t]he structure . . . is the basic . . . structure for all embodiments"); *Watts v. XL Sys., Inc.*, 232 F.3d 877, 883 (Fed. Cir. 2000) (stating, in the written description, "the present invention utilizes ["14] [the] feature").

The longstanding difficulty is ^{HN7} the contrasting nature of the axioms that (a) a claim must be read in view of the specification and (b) a court may not read a limitation into a claim from the specification. See *Liebel-Flarsheim*, 358 F.3d at 904-05 (acknowledging the "fine line" and "inherent tension" attending the question presented by these axioms). For, as Justice Bradley famously stated:

Some persons seem to suppose that a claim in a patent is like a nose of wax which may be turned and twisted in any direction, by merely referring to the specification, so as to make it include something more than, or something different from, what its words express. The context may, undoubtedly, be resorted to, and often is resorted to, for the purpose of better understanding the meaning of the claim; but not for the purpose of changing it, and making it different from what it is. The claim is a statutory requirement, prescribed for the very purpose of making the patentee define precisely what his invention is; and it is unjust to the public, as well as an evasion of the law, to construe it in a manner different from the plain import of its terms. This ^{HN15} has been so often expressed in the opinions of this court that it is unnecessary to pursue the subject further.

White, 119 U.S. at 51-52; see also *Cont'l Paper Bag*, 210 U.S. at 419; *McCarty*, 160 U.S. at 116 ("We know of no principle of law which would authorize us to read into a claim an element which is not present . . ."). Accordingly, particular embodiments appearing in the written description will not be used to limit claim language that has broader effect. See *Electro Sci. Indus., Inc. v. Dynamic Details, Inc.*, 307 F.3d 1343, 1349 (Fed. Cir. 2002); *Laitram Corp. v. NEC Corp.*, 163 F.3d 1342, 1347-48 (Fed. Cir. 1998). And, even where a patent describes only a single embodiment, claims will not be "read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction." *Liebel-Flarsheim*, 358 F.3d at 906 (quoting *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1327 (Fed. Cir. 2002)).

IV

Innova's appeal with respect to the asserted claims of the 759 patent ^{HN16} turns on the correct interpretation of the disputed claim term, "operatively connected." According to the district court, the ordinary meaning of "said tube operatively connected to said cap" requires that the two components ^{HN18} be "affixed . . . by some tenacious means of physical engagement that results in a unitary structure." Innova challenges this construction as improperly importing a tenacious physical engagement limitation into claim language that does not require any such thing. Safari concurs with the district court. The district court erred. The asserted claims do not require that the filter tube and cap be affixed to one another in a manner that results in the two components forming a unitary structure. Neither party asserts that the term "operatively connected" is a technical term having a special meaning in the art of water filtration. Rather, it is a general descriptive term frequently used in patent drafting to reflect a functional relationship between claimed components. Generally speaking, and as used in the 759

patent, it means the claimed components must be connected in a way to perform a designated function. ^{HN17} In the absence of modifiers, general descriptive terms are ^{HN17} typically construed as having their full meaning. See *Johnson Worldwide*, 175 F.3d at 992 (refusing to import a modifier for the term "coupled"); *Va. Panel Corp. v. MAC Panel Co.*, 133 F.3d 860, 865-66 (Fed. Cir. 1997) (refusing to import a modifier for the term "reciprocating"). Thus, the district court was correct to look to the ordinary meaning of the terms "operatively" and "connected" and we discern no error in the district court's initial understanding that "the ordinary and customary meaning of 'operatively connected' requires the . . . linking together of the tube and the cap to produce the intended or proper effect." But the district court erred when it proceeded beyond this plain meaning based on the "examples of means for connecting the tube to the cap disclosed in the 759 patent," all of which reflect a "physical engagement [between the tube and the cap] that results in a unitary structure." See *Teleflex*, 299 F.3d at 1328.

The district court also erred in interpreting the "intended or proper effect," i.e., the designated function, to be the operation of "creating a filter assembly" with a unitary structure. Instead, ^{HN18} as Innova contends, the proper designated function is the operation of the assembly, i.e., filtering. Thus, "said tube [is] operatively connected to said cap" when the tube and cap are arranged in a manner that affects filtering. Safari contends that the district court was correct because for a connection to be operative for filtering, the structure performing the filtering must also be associated with a bottle, a limitation not found in claim 1 of the 759 patent. We disagree because the claims, and also the written description, reflect that an intended purpose for the claimed invention is for use with a bottle to filter water.

Focusing first on the claims, we observe that the preamble of claim 1 recites: "A filter assembly for use with a bottle . . . to simultaneously cap the neck or open end and filter liquid poured out of the bottle . . ." 759 patent, col. 6, ll. 45-49 (emphasis added). ^{HN19} Language in a preamble limits a claim where it breathes life and meaning into the claim, see *In re Paulsen*, 30 F.3d at 1479, but not where it merely recites a purpose or intended use of the invention." *Id.* In this case, we need not decide whether the preamble ^{HN19} adds a limitation to the claim because we hold that it recites a purpose or intended use of the claimed "filter assembly" as, inter alia, "filtering liquid poured out of the bottle."

Other parts of claim 1 also show that the intended function of the claimed structure is filtering. Beyond stating that the "tube is operatively connected to said cap," the claim also states that a "valve" is "operatively associated with said cap, in fluid communication with said tube of filtering material." '759 patent, col. 6, ll. 58-59. The claim further explains that the "valve" controls the [1119] flow of liquid through the "tube of filtering material" as the valve is "manually movable between a position defining means for allowing liquid flow through said tube and a position defining means not allowing liquid flow through said tube." *Id.*, ll. 58-63. In sum, we think the operation defined by controlling the flow of liquid through the "tube of filtering material" is the operation of filtering.

As Safari acknowledges, Innova's argument that "operatively" refers to the function of filtering, has even "more traction" when applied to claim 15. Claim 15 is directed to "[a] container for dispensing filtered [20] water." '759 patent, col. 7, l. 55. It expressly claims a bottle as an element of the disclosed structure. *Id.*, ll. 56-58. It contains the "in fluid communication" limitation present in claim 1. *Id.*, col. 8, ll. 4-9. And, it contains additional language explaining the position of the tube of filtering material relative to the cap, the bottle, and the liquid flow:

said tube operatively connected to said cap second surface, and said tube having an outside diameter less than said inside diameter of said neck, and positioned with respect to said cap within said bottle so that said tube axis is substantially transverse to said second surface and so that flow of liquid through said tube is primarily radial with respect to said tube axis during filtering, and through said side wall.

Id., ll. 10-17.

Not only do both claims evidence that an intended function or operation of the claimed structure is filtering, such a function is also evident from the written description, e.g., "there is a significant demand for filtered drinking water . . ." '759 patent, col. 1, l. 6; "a filter assembly is provided . . . capable of effectively treating drinking water to [21] remove chlorine and organic taste contaminants therefrom and reduces a variety of

chemical contaminants." *Id.*, ll. 25-29. ^{HN10} Unless otherwise compelled, when different claims of a patent use the same language, we give that language the same effect in each claim. See *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1334 (Fed. Cir. 2003). Here, we are not otherwise compelled. "Operatively connected" carries the same meaning in both claims.

Furthermore, we observe that Safari's interpretation largely reads the term "operatively" out of the phrase "operatively connected." ^{HN11}

⁴ While not an absolute rule, all claim terms are presumed to have meaning in a claim. Cf. *Pickholtz v. Rainbow Techs., Inc.*, 284 F.3d 1365, 1373 (Fed. Cir. 2002). If, as Safari proposes, the claim refers in the abstract to the creation of a filter assembly structure, without any grounding in an intended use, the term "operatively" is unnecessary and superfluous as the patentee could have as easily used the term "connected" alone.

Safari also proposes that the district court's construction can be supported by the patentee's use, in claim 15, of "operatively connected" and "operatively [22] associated." The argument is that the patentee's use of the term "connected" to claim the tube-cap relationship stands in such stark contrast to the patentee's choice of "associated" to define the valve-cap relationship, that the patentee could only have intended that

"connected" and "associated" were of different scope. Despite Innova's assertion to the contrary, ^{HN12} when an applicant uses different terms in a claim it is permissible to infer that he intended his choice of different terms to reflect a differentiation in the meaning of those terms. See *Bancorp Servs., L.L.C. v. Hartford Life Ins. Co.*, 359 F.3d 1367, 1373 (Fed. Cir. 2004); *Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.*, 13 F.3d 1572, 1579 (Fed. [1120] Cir. 1998). For this argument to be dispositive of a particular claim construction, however, one must accept that "connected" and "associated" can be discerned along the lines Safari urges. In particular, one must accept the argument that although both terms can, by their plain meaning, include nonphysical attachment, "associated" was meant to define both nonphysical and physical attachment while "connected" was used in a narrower sense, incorporating [23] only a physical attachment definition. Safari urges that we can make the distinction based on the disclosed embodiments. We disagree. While an inference that "connected" and "associated" have different meanings in this case may be particularly appropriate because the words here define the relationship between two objects, the terms "connected" and "associated" are very similar in meaning. The context does not make clear to us that Innova's use of both terms means that "connected" should be limited to tenacious physical engagement. Moreover, we observe that in at least one circumstance, Innova described the filter as "associated" with the cap. '759 patent, col. 1, ll. 41-43 ("a cap with which the filter is associated being adaptable to fit any type of closure mechanism on a conventional plastic bottle"). Finally, as we discuss in further detail, *infra*, we decline to limit the claims based only on the embodiments in the written description. Thus, the context does not show that "connected" and "associated" should be differentiated into the definitions proposed by Safari, and we must conclude that this is simply a case where the patentee used different words to express similar concepts, [24] even though it may be confusing drafting practice. *Bancorp Servs.*, 359 F.3d at 1373.

In sum, subject to any clear and unmistakable disavowal of claim scope, the term "operatively connected" takes the full breadth of its ordinary meaning, i.e., "said tube [is] operatively connected to said cap" when the tube and cap are arranged in a manner capable of performing the function of filtering.

Safari contends that in the written description and prosecution history the patentee clearly and unmistakably disavowed the full breadth of meaning of "operatively connected" and put the public on clear notice that the claims should be limited to cover only embodiments where the tube and cap are tenaciously physically engaged. Concerning the written description, Safari relies most heavily on the argument that at

"every point" in the written description where "operatively connected" is discussed, it is discussed as having the "common denominator" of tenacious physical engagement. However, at argument, Safari's counsel had difficulty pointing to a statement in the written description that clearly and unmistakably shows the applicant's intent to limit the scope of the ["25] claims to tenacious physical engagement. Undaunted, Safari contends that even if we disagree that the written description contains specific language clearly showing disavowal, the applicant's clear and unmistakable disavowal of all embodiments in which the tube is not tenaciously engaged to the cap is evident from reading the written description as a whole. According to Safari, when one reads the written description from beginning to end, there is no disclosure of a tube and cap arrangement where the tube and cap are not, in the words of the district court, "affixed . . . by some tenacious means of physical engagement that results in a unitary structure." Safari also relies heavily on the observation that not a single drawing in the written description depicts an arrangement of tube and cap in other than tenacious ["1121] engagement. n1 Thus, contends Safari, because courts do not construe claims beyond what is disclosed in the written description, the written description demands a finding by this court that "operatively connected" is limited to tenacious physical engagement. Making the same argument, although in different terms, Safari argues that, acting as his own lexicographer, the patentee ["26] in this case defined "operatively connected" as requiring tenacious physical engagement. Again, we disagree.

----- Footnotes -----

n1 Innova unsuccessfully disputes this aspect of the disclosure.

----- End Footnotes -----

1

The abstract of the written description contains the statement: "The tube is operatively connected to the cap second surface at the tube second open end by sonic welding, a mechanical connection, or adhesively." 759 patent, Abstract. While a statement in the Abstract may operate as a clear expression of manifest exclusion, for several reasons, this statement does not. Nor does this statement weigh heavily when considering whether the applicant has acted as his own lexicographer. To begin, this statement is in the Abstract of the patent. This section of a patent speaks generally to the invention and, much like the syllabus of an opinion, sets forth general information about the document's content, which is described in more detail in the remainder of the document. Second, in our view, this statement reflects the applicant's attempt to ["27] disclose the broad array of means by which the tube can be connected to the cap. This observation begs a third point. Safari, and it seems the district court, appear to believe the term "mechanical connection" requires tenacious physical engagement, and accordingly, cannot include within its scope Safari's product, which suspends the tube of filtering material in the bottle mouth by means of an annular flange sealed in place by a cap screwed over the mouth of the bottle. We simply do not agree. By a twist of the wrist, the bottle cap is screwed tight, thus mechanically locking the filter to the lip of the bottle.

The connection of the filter and cap is addressed in other portions of the written description. The paragraph beginning: "According to the present invention . . .," 759 patent, col. 1, l. 23, describes the "filter assemblies and containers according to the present invention," id., ll. 38-39, as having "the actual filter element being connected to the other components either adhesively, mechanically, or by welding (e.g. sonic welding), a cap with which the filter is associated being adaptable to fit any type of closure mechanism on a conventional plastic bottle . . . ["28] . . ." id., ll. 38-44. Although at first glance one might think that the use of the word "associated" creates a requirement that the filter and cap be affixed in tenacious physical engagement, it does not. Without doubt, a structural element "associated" with a separate structural element can be tenaciously physically engaged. However, there is no requirement that this be so because the word "associated" merely effects that the recited elements be joined in some kind of relationship. Thus, in contrast to, for example, *Scimed*, this language is less direct, clear, and defining than the phrase "[the] structure . . . is the basic . . . structure for all embodiments." 242 F.3d at 1344.

The kernel of Safari's position is that the embodiment, or embodiments, depicted in the figures and written description show "not merely adjoining or abutting, but affixing the tube to the cap by some tenacious means of physical engagement that results in a unitary structure."

Perhaps the most straightforward answer ["1122] to Safari's argument is that ^{HN13} the law does not require the court, where an applicant describes only a single embodiment, to construe the claims as limited to that one embodiment. ["29] See, e.g., *Liebel-Flarsheim*, 358 F.3d 98, 906-09. Indeed, such a construction is not encouraged or presumed. Id. From another level of abstraction, of course, the patentee's disclosures in this case could be viewed as the disclosure of many embodiments. So viewed, the patentee presented several examples of the types of connections between the filter tube and cap useful for the invention and in all examples depicted the connection as a tenacious physical engagement. Here, this is a difference without substance. As noted earlier, the specification as a whole reflects the patentee's efforts to describe and claim all operative connections. Also, the written description discloses that the operative connection can be "mechanical," a feature we conclude is present in the arrangement of the filter tube and cap in Safari's product as presented to this court. Finally, and most importantly, Safari's argument flies into the sun that is the plain import of the claim language "operatively connected." We thus decline to apply Safari's reasoning.

According to Safari, the prosecution history is "consistent with" their proposed definition of "operatively connected," and, ["30] based on representations made to secure the 759 patent, "Innova is estopped" from arguing that any other construction is possible. We conclude that the prosecution history does not preclude the construction advanced by Innova and adopted in this opinion.

Safari first refers to a section 103 rejection made by the examiner to pending claims 1-18. In that rejection, the examiner stated:

Regarding the various means of attaching the tube to the cap, such as welding, adhesion, etc., these features are considered to be conventional and would have been obvious in the device of [the prior art] to provide alternative conventional attachment means.

We note here, that claim 13 ultimately issued as claim 1. At the time of the rejection however, claim 13 was merely a claim depending from then claim 1 and recited a type of filtering material. Claim 1, from this point in the prosecution history later issued as claim 22. n2 Even so, this claim contained the relevant "said tube operatively connected to said cap" language, and the cited portion of the examiner's rejection is properly read as referring to this connection.

----- Footnotes -----

n2 At this stage in the prosecution, the claim that would issue as claim 15 in the 759 patent was claim 19. Although it contained, "said tube operatively connected to said cap," the examiner did not include it in this rejection.

----- End Footnotes ----- [**31]

Responding, the patentee made a number of arguments concerning pending claim 1, of which the district court and appellee make no issue. Then, addressing dependent claims 2-18, the applicant made the statement:

In fact, it is believed that the dependent claims even more clearly and unequivocally distinguish from the art. For example, no place in either [prior art reference] are the mutually exclusive adhesive connection of claim 2, welding, (e.g., ultrasonic welding) of claim 3, or mechanical connection of claim 5 pointed out in the previous action or seen in the references, let alone the particular O ring connection recited in claim 6, or the particular mechanical connection flanges of claim 17.

[**1123] Although asserting that the "significance placed on this feature by Innova estops Innova from disclaiming that the filter tube is affixed to the cap," Safari fails to explain how this statement demands such a conclusion. After careful consideration of the content of the statement, we conclude that it does not clearly and unambiguously disavow mechanical connections where the filter tube is not tenaciously physically engaged to the cap. See Omega Eng'g, 334 F.3d at 1323-24. [**32] In particular, we note that dependent claims are typically narrower and, by so being, are more likely to clearly distinguish the prior art. Generally speaking, this is, in part, their function. In addition, it is of little moment that the dependent claims mentioned in the response refer to connections that result in a unitary structure. This is so for at least two reasons. First, the language of the response refers to claims that specifically claim embodiments in which the filter tube and cap are tenaciously physically engaged. By the patentee's selection of language, which the examiner allowed, claims 1 and 15 are not facially limited to such embodiments. Second, to accommodate Safari's argument now, we would have to conclude that it would be appropriate to limit an

independent claim by the additional limitations of claims depending from that claim. Although, in some cases this might be possible, ^{HN14} the doctrine of claim differentiation "normally means that limitations stated in dependent claims are not to be read into the independent claim from which they depend." Karlin Tech., Inc. v. Surgical Dynamics, Inc., 177 F.3d 968, 971-72 (Fed. Cir. 1999) (stating that [**33] this interpretative tool stems from "the common sense notion that different words or phrases used in separate claims are presumed to indicate that the claims have different meanings and scope"). In sum, the argument that dependent claims, which require tenacious engagement, "more clearly . . . distinguish from the art" does not mean that claims from which those claims depend are equally limited.

Next, Safari points to a dialog between the examiner and patentee where the examiner rejected then-pending claim 17 because "it would have been obvious to utilize the flange/projections of [the prior art] . . . to provide an alternative but equivalent connection means." The claim addressed by this rejection literally claims a connection between the tube and cap that uses a flange extending from the filter tube to engage the cap. The applicant responded to the rejection thus:

For example, [the prior art] shows an axial filter that is sealed at the top and employs a mixture of anion and cation resins, using the flange to suspend the filter of ion exchange resins which operate in axial flow mode This is contrary to [other prior art] and the claimed invention.

Safari [**34] contends that this statement disavows the use of a flange to suspend the filter tube. Innova contends that this statement was directed to the distinction of radial as opposed to axial filtering. Careful inspection of the prosecution history indicates that Innova has the better argument. Beginning with the statement itself, we cannot distinguish whether it is referring to the filter or the flange. Examining the following

Office Action, we observe that the examiner understood Innova's statement to be referring to the filter: "The applicants also argue that [the prior art] discloses an axial filter; however [the prior art] was cited solely for the feature of a conventional flange on the rim of the tubular filter." Following this discourse, a telephone interview occurred, after which the examiner allowed the claim, unamended, and still directed to the use of [1124] a flange to make the tube-cap connection. n3 This series of communications does not reflect the clear and unambiguous disavowal of caps and filters connected by mechanical means short of tenacious physical engagement. Rather, it reflects first, the examiner and applicant talking past one another. It reflects second, that the applicant [1135] was able to convince the examiner, by off the record communications, to retreat from her position. However unfortunate it is that the public and this court are prevented from knowing what arguments caused the examiner to abandon her position, the record finally reflects the examiner's acquiescence to the claim language chosen by the applicant. This is not clear evidence of the patentee's disavowal of claim scope.

----- Footnotes -----

n3 It issued as claim 14 of the '759 patent.

----- End Footnotes -----

Safari also points to a rejection entered by the examiner, where the examiner describes a piece of asserted prior art as "considered to disclose a tubular filter attached to a cap as instantly claimed." It is well settled, however, that ^{HN15} it is the applicant, not the examiner, who must give up or disclaim subject matter that would otherwise fall within the scope of the claims.

V

Innova argues the district court erred by denying the motion to amend the complaint to add the '362 patent because there was no delay on Innova's part, and no unfair prejudice to [1136] Safari would result from granting the motion. At the outset, ^{HN16} this is a nonpatent matter where we apply the law of the circuit in which the district court sits. See Cultor Corp. v. A.E. Staley Mfg. Co., 224 F.3d 1328, 1332-33 (Fed. Cir. 2000). This appeal is from the middle district of Florida, within the eleventh circuit, which reviews the refusal of leave to amend for abuse of discretion. Lowe's Home Ctrs., Inc. v. Olin Corp., 313 F.3d 1307, 1314-15 (11th Cir. 2002). On this deferential standard of review, we detect no abuse of discretion.

^{HN17} In the eleventh circuit, the court freely grants leave to amend when justice so requires. Camuthers v. BSA Adver., Inc., 357 F.3d 1213, 1217-18 (11th Cir. 2004). However, a motion to amend may be denied on "numerous grounds, such as undue delay, undue prejudice to the defendants, and futility of the amendment." Maynard v. Bd. of Regents of Div. of Univs. of Fla. Dep't. of Educ., 342 F.3d 1281, 1287 (11th Cir. 2003) (citation and internal quotation marks omitted). In addition, "it is not an abuse of discretion for a district court to deny a motion for leave to amend following [1137] the close of discovery, past the deadline for amendments, and past the deadline for filing dispositive motions." Lowe's, 313 F.3d at 1315.

A number of these considerations are present in this case. In particular, Innova sought to amend the complaint approximately six months after the '362 patent issued, ten months after discovery closed, and nine months after the filing of summary judgment motions. Accordingly, the district court did not abuse its discretion when it denied Innova's motion to amend.

VI

In conclusion, the correct claim construction does not limit claims 1 and 15 to only embodiments where "said tube [is] operatively connected to said cap" by mechanical means that result in tenacious physical engagement. Accordingly, the district court erred when it granted Safari's motion for summary judgment of no literal infringement based on the fact that in Safari's accused product the filter tube is "never affixed to the cap by some tenacious [1125] means of physical engagement as required by claims 1 and 15." For the same reasons, the district court erred in granting summary judgment of no infringement under the doctrine of equivalents based on its factual conclusion [1138] that "merely adjoining or abutting . . . is not the equivalent of affixing the tube to the cap." And, finally, as discussed, we disagree with the district court that the applicant, in the course of prosecution, surrendered the method employed in the Safari product of using a flange to position the filter element.

On the record before us, however, we cannot be certain that reversing and entering summary judgment in favor of Innova is the proper course of action. We leave that decision, in the first instance, to the district court. Thus, we vacate the district court's grant of summary judgment of noninfringement in favor of Safari and remand for further proceedings in light of the correct claim interpretation. Because we detect no abuse of discretion, we affirm the district court's denial of Innova's motion to amend the complaint to add the '362 patent.

OSTS

to costs.

ACATED-IN-PART, AFFIRMED-IN-PART, REMANDED

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